

“Tourism and Environmental Stress in Manali Himalaya”

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Abstract: Exploitation of the environment in terms of vast development and changing life styles due to tourism has resulted in various life – threatening problems related to environment. Environment pollution is by far the most rapidly growing hazard of the modern technological society. In spite of diligent efforts of environmental engineers, scientists, enlightened legislators and an aroused public, our environmental problems, remain. In view of limited resources (local, national & global), an increase in the population due to tourism, and the need for development as well as the need to protect the eco-systems that sustain the production capacity, the importance of achieving environmentally sustainable forms of development is the need of the hour. Manali is one of the leading hill stations of India and thousand tourists from all over the world travel to Manali daily. Tourism Industry is the main source of income of the local people. Due to tourism this hill station is facing lots of environmental problem like floods, landslides, soil erosion, deforestation, rock fall, fire, and water pollution. Govt. can play a major role to create environmental awareness among the local people. Government should prepare high-risk zone maps of Manali Himalayas and accordingly initiate environmental education and awareness programmes as soon as possible; otherwise we will lose the natural beauty very soon in Himalayas region.

Introduction:

Mountains cover around 27% of the Earth's land surface and contribute to the sustenance and wellbeing of 720 million people living in the mountains and billions more living downstream. In other words, over half the human population depends on mountains for water, food, and clean energy. Development of tourism is no doubt a major concern of many Developing countries today including India. Its growth has no doubt produced many positive results, but tourism professional it is necessary to know that unplanned and controlled growth in tourism has serious implications for the society and environment.

Generally such impacts are ignored by the policy makers and planners. Tourism is normally seen as a money minting industry. With the kind of growth rate and the income generation abilities, it assumes a particular significance in India. In the absence of a trade surplus or a sound foreign exchange reserve, tourism is making a phenomenal though unplanned growth. But the returns of tourism should not obscure the long-term impacts of this smokeless industry on the local environment.

The land of Himachal Pradesh is full of beauty and natural scenery. Kullu is one of its most beautiful districts, situated at the bank of Beas River in Kullu valley. Manali city is situated at the northern end of the Kullu valley. The paradise of the earth Manali is 40 km north to the Kullu and 590 kms north to the National Capital New Delhi. It is situated at the 2050 meters high altitude from sea level. Manali is extended between 32°13' N to 32°15'N latitude and 77°05' to 77°10'E longitude. It is known as Switzerland of India.

Manali is one of the leading hill stations of India. Thus thousands of tourists from all over the world travel to Manali daily. Tourism industry is the main source of income of the local people here. Manali valley is full of beauty and charm with the majestic gardens of the Himalaya on one side, river Beas cutting across the town, verdent valley with rolling meadows and the folk music adding romance and presenting a wonderous canvas to the travellers on the other side. Manali has also several historical temples and places of natural beauty, which attracts people towards it. In Year 2017, 38,860 **tourists** vehicles reached **Manali** while the same figure for May last year was 32,113. The collective figure of **tourists** vehicles influx in **Manali** in May-June month for year **2017** is 99,057 which is much more as compared to 79, 639 for the same period in 2016.

Although Manali is a small hilly area but lot of centres for tourists are here. In Manali, Tourism became important since the late eighties due to the following reasons:

- i. Annual holiday with Financial package.
- ii. Less crowded than other hilly areas.
- iii. Faster means of communication and development of roads.
- iv. Spread of social awareness and education.
- v. Better publicity and advertisement through mass media.

- vi. Tourist services offered by tour operators – reservation of accommodation, transport; conducted trips; hiring of equipments for trekking and climbing; trained guides and detailed information etc.
- vii. Very less crime.
- viii. Good infrastructure.

Technical Definitions of Tourist shows below given table.

To be included in tourism statistics		Not to be Included in tourism statistics
Category	Purpose	Category
<i>Tourists:</i>	Holidays	Border workers
non-residents	business	Transit passengers
nationals resident abroad	health	Nomads
crew members	study	refugees
	meetings/ missions	Members of armed forces
<i>Excursionists:</i>	VFR	Diplomats
cruise passengers	religion	Temporary immigrants
day visitors	sport	Permanent immigrants
crews	others	

Source: Adapted from WTO (1994)

The Manali is a vast repository of natural and cultural resources. Tourism is unique. It involves industry without smoke, education without classroom, integration without legislation and diplomacy without formality that depends on the environmental ingredients like beauty, climate, waterbodies, forests, faunas etc. for its raw materials. The attractive parameters of tourism in Manali are:-

- a. Dense pristine forests rich in exotic flora and fauna.
- b. Exquisite scenic grandeur, vast panorama of majestic snow capped Himalayan peaks;
- c. Bracing climate with abundant sunshine, azure sky, unpolluted cool breeze charged with oxygen;

- d. Serene solitude, quiet and tranquil wilderness;
- e. Gushing mountain torrents offering amenities of recreation (picnic), adventure sports (rafting canoeing) waterfalls, angling, boating and other sites
- f. A meeting point of various religion.
- g. Easy accessibility by road, and air (from anywhere in India) and accommodation catering to the needs of various budget levels;
- h. Life and cultural styles of the local people (way of life, arts, crafts, music, folklore, festivals religion practices);

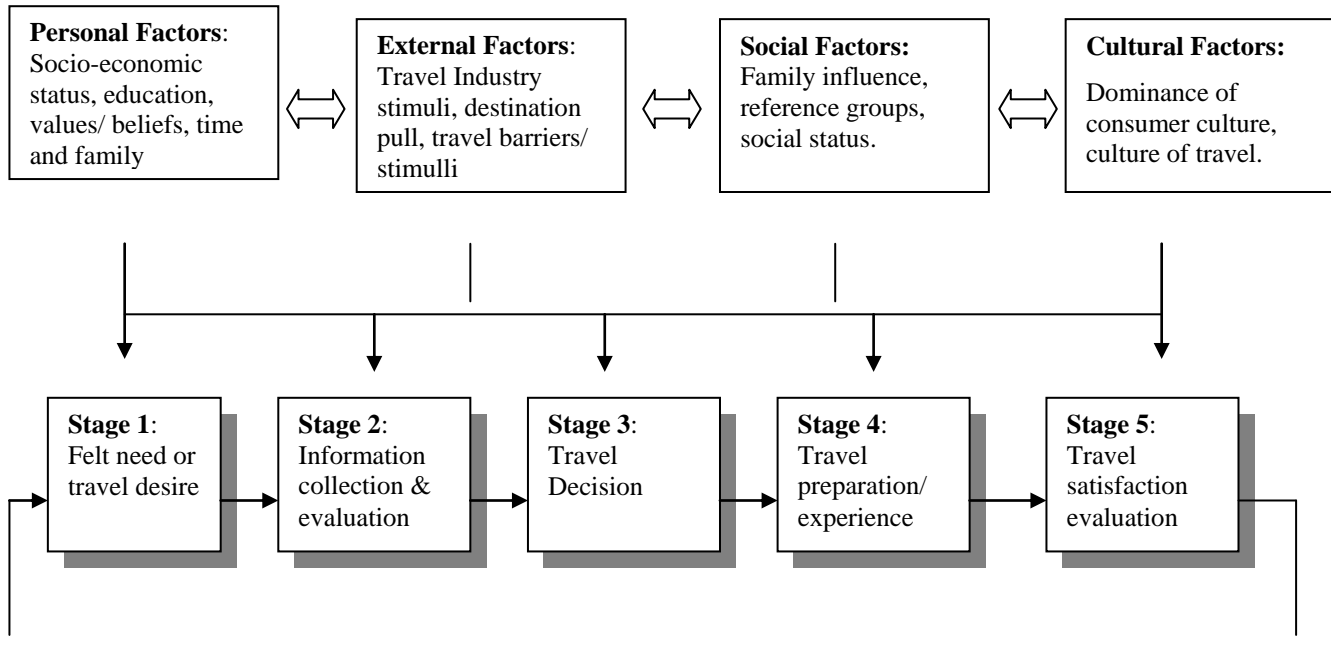
Other amenities – zoo, museum, shopping or cafe, club, cinema hall, foreign currency exchange facilities, tour operators and guides, information bureau, medical, postal & internet facilities etc.

Below table shows the major potential impact on tourism on the built environment.

Impact Aspect	Potential Consequences
Urban Form	<ul style="list-style-type: none"> ➤ Change in character of built area through urban expansion or redevelopment. ➤ Change in residential, retail or industrial land use (e.g., more from private houses to hotels). ➤ Changes to the urban fabric (e.g., roads, pavements etc.)
Infrastructure	<ul style="list-style-type: none"> ➤ Over load to infrastructure (e.g., roads, railways, car parking, electricity grid, communication systems, waste disposal, buildings water supply. ➤ Provision of new infrastructure or upgrading or existing infrastructure. ➤ Environmental management to adopt areas for tourist use (e.g. sea walls, land reclamation).
Visual Impact	<ul style="list-style-type: none"> ➤ Growth of the built-up area. ➤ New Architectural styles. ➤ People and belongings, litter. ➤ Beautification.
Restoration	<ul style="list-style-type: none"> ➤ Re-use of disused buildings. ➤ Restoration and preservation of historic buildings and sites. ➤ Restoration of buildings and second homes.
Erosion	<ul style="list-style-type: none"> ➤ Damage of built assets from feet and vehicular traffic (including vibration effects).
Pollution	<ul style="list-style-type: none"> ➤ Air pollution from tourists and tourist traffic. ➤ Air pollution from non-tourist sources causing damage to built assets.

Source: IGNOU, MTM-11, Page 15, 2001

Before going to deep of this paper we have to know about tourism demand process by given below diagram:



Manali is leading tourist centre in India where almost summer and winter tourist enjoy their holidays and simultaneously they destroy the local environment .

Below given table shows the Negative Impact of Tourism on Manali Environmental

Area of Effect	Negative Impacts
Biodiversity	<ul style="list-style-type: none"> ▪ Disruption of breeding/ feeding patterns ▪ Killing of animals for leisure (hunting) or for souvenirs. ▪ Loss of habitats and change in species composition. ▪ Damage/ destruction of vegetation.
Erosion and Physical damage	<ul style="list-style-type: none"> ▪ Soil erosion. ▪ Damage of sites through trampling. ▪ Overloading of key infrastructure (e.g. water, sewage, transport).
Pollution	<ul style="list-style-type: none"> ▪ Water pollution through sewage disposal, fuel spillage, construction activity and rubbish discarded by tourists. ▪ Air pollution (e.g. vehicle emissions). ▪ Noise pollution (e.g. construction work, traffic, bars and discos etc.) ▪ Disposal of solid waste materials (e.g. landfill).

	<ul style="list-style-type: none"> ▪ Littering.
Resource Base	<ul style="list-style-type: none"> ▪ Depletion of ground and surface water. ▪ Diversion of water supply to meet tourist needs (e.g. golf courses, pools, hot showers etc.) ▪ Depletion of local fuel sources (e.g. firewood). ▪ Depletion of local building material sources.
Visual/ structural change	<ul style="list-style-type: none"> ▪ Land transfers to tourism (e.g. from agriculture). ▪ Detrimental visual impact on natural and non-natural landscapes through tourism development. ▪ Introduction of new architectural styles. ▪ Changes in (urban) functions. ▪ Physical expansion of built-up areas.

The paper shows the ecological imbalance by tourists in Manali by various reasons which mentioned above but to control over environmental degradation in this region we must take some strongly steps and planning and management strategies should implemented.

Planning and management strategies for alleviating tourist impacts in Manali Himalaya

Policy/ planning	<ul style="list-style-type: none"> ▪ Development plans which include tourism and which set out zones or sites for tourist use, determine rights of access to areas, and consider what sort of activities are suitable for the area. ▪ Develop and enforce regulations to control aspects of development and tourist activity. ▪ Require environmental impact assessments and monitoring for tourist developments. ▪ Use economic mechanisms such as subsidies to encourage more sustainable practices and 'user pays' to control use and provide income for conservation and rehabilitation of the environment.
Development/ Construction	<ul style="list-style-type: none"> ▪ Consider choice of sites and site design carefully to

of Facilities	<p>ensure minimal impact.</p> <ul style="list-style-type: none"> ▪ Use minimal impact construction techniques. ▪ Use native species for landscaping and appropriate architectural styles.
Management of Resources	<ul style="list-style-type: none"> ▪ Conduct environmental audits. ▪ Develop and use recycling, waste minimisation and energy efficiency programs.
Management of visitors	<ul style="list-style-type: none"> ▪ Design systems which control visitor flows. ▪ Use interpretation/ education to encourage sustainable behaviour.
Adapting the Environment	<ul style="list-style-type: none"> ▪ Harden sites for protection. ▪ Provide facilities which influence visitor activities.
Marketing and Promotion	<ul style="list-style-type: none"> ▪ Consider tourism concepts and products better suited to the environment. ▪ Provide accurate information in advertising to ensure that visitors have appropriate expectations.
Education	<ul style="list-style-type: none"> ▪ Use effective interpretation services to encourage visitors to engage in more sustainable behaviours. ▪ Provide environmental education for tourism personnel. ▪ Develop codes of conduct for tourist, staff, operators and other tourism sectors.
Research and Monitoring	<ul style="list-style-type: none"> ▪ Support research which seeks to improve understanding of the tourism-environment relationship. ▪ Evaluate the effectiveness of any programs and activities conducted. ▪ Monitor environmental quality.

Conclusion: Mountain tourism has a good potential for growth in India. Efforts should be taken to mitigate the harmful effects of tourism on the hill environment. In fact, mountain tourism needs to be carefully organized. A proper planning focussing on the vital infrastructural areas will go a long way in harnessing its potential. Manali hilly region is eco-fragile and cannot sustain tourism activity beyond a certain point. Therefore, planning

tourism activity in this region in such manner as to take care of the harmful impact on the region is vitally necessary. Marco-planning for the region must account for ecological and socio-cultural concerns of the people of the region. Possibly then we shall be in a position to adequately utilise this vast and valuable resource for tourism purposes.

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